

566.43181X00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Takashige IWAMURA et al.

Serial No.: 10/676,121

Filed: October 2, 2003

For: MULTI-SITE REMOTE-COPY SYSTEM

**PETITION TO MAKE SPECIAL
UNDER 37 CFR 1.102(d) and MPEP. §708.02, VIII**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 27, 2005

Sir:

1. Petition

Applicants hereby petition to make this application **Special**, in accordance with 37 CFR §1.102(d) and MPEP 708.02, VIII. The present invention is a new application filed in the United States Patent and Trademark Office on October 2, 2003 and as such has not received any examination by the Examiner.

2. Claims

Applicants hereby represent that all the claims in the present application are directed to a single invention. If upon examination it is determined that all the claims presented are not directed to a single invention, Applicants will make an election without traverse as a prerequisite to the granting of special status.

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3. Search

Applicants hereby submit that a pre-examination search has been made by a professional searcher, (a copy of which is attached), in the following classes and subclasses:

| <u>Class</u> | <u>Subclass</u> |
|--------------|-----------------------------------|
| 707 | 204 |
| 711 | 111, 112, 113, 114, 162, 165, 167 |
| 714 | 5, 6, 7 |

4. Copy of References

A listing of all references found by the professional searcher is provided on a Form PTO-1449 and copies of the references and the Form PTO-1449 are submitted as part of an Information Disclosure Statement (IDS) filed on even date.

5. Detailed Discussion of the References and Distinctions Between the References and the Claims

Below is a discussion of the references uncovered by the search and cited in the IDS filed on even date that appear to be most closely related to the subject matter encompassed by the claims of the present application, and which discussion particularly points out how Applicants' claimed subject matter is distinguishable over those references. All other references uncovered by the search and cited in the IDS filed on even date are **not** treated in detail herein.

a. Detailed Discussion of the References

U.S. Patent Publication Number 2004/0024975 (Morishita et al.) discloses a remote copy for duplicating data in a storage system at a remote place. The system includes a synchronous remote copy for transferring data to a secondary storage control unit before a termination report of write processing carried out in response to a write request from the host (1), or another storage system (2), and an asynchronous remote copy for transferring data to a secondary storage control unit asynchronously with a write request after a termination report of write processing (see, figures and paragraphs [0022]-[0040]).

U.S. Patent Publication Number 2004/0153719 (Achiwa et al.) discloses a information processing system including a first storage apparatus and a first information processing apparatus that accesses the first storage apparatus installed on a first site; a second storage apparatus and a second information processing apparatus that accesses the second storage apparatus installed on a second site; and a third storage apparatus and a third information processing apparatus that accesses the third storage apparatus installed on a third site. A synchronous system or an asynchronous system may be employed depending on differences in the condition in sending a data write completion notice from a storage apparatus set as a replication source to an information processing apparatus when data is written in the storage apparatus set as the replication source (see, figures, claims and paragraphs [0047] +).

U.S. Patent Number 5,937,414 (Souder, et al.) discloses a method and apparatus for replicating data. The method allows changes to the same body of data to

be replicated synchronously to some destination sites and asynchronously to other destination sites. Such mixed propagation configurations allow synchronous updating to selected remote copies of replicated data where data integrity is a high priority, and asynchronous propagation to remaining copies of replicated data in order to allow transactions to be committed locally regardless of whether the transaction is committed at a remote copy of the replicated data (see, figures and summary).

U.S. Patent Numbers 5,555,371 (Duyanovich et al.), 5,615,329 (Kern et al.), 5,673,382 (Cannon et al.), 5,870,537 (Kern et al.), 6,477,627 (Ofek), 6,587,935 (Ofek), 6,813,683 (Tabuchi et al.), U.S. Patent Application Numbers 2003/0105934 (Kimura et al.), 2003/0145168 (LeCrone et al.), 2003/0188233 (Lubbers et al.), 2003/0200387 (Urabe et al.), 2004/0230756 (Achiwa et al.), 2004/0230859 (Cochran et al.) and European Patent Number 1283469 (Nakano et al.) disclose multi-site synchronous/asynchronous remote copy systems.

b. Distinctions Between the References and the Claims

The present invention as recited in the claims filed are not taught or suggested by any of the above noted references whether taken individually or in combination with each other or in combination with any of the other references now of record.

The present invention as recited in the claims is directed to a system that includes a computer and a storage subsystem, wherein the computer duplicates data and writes them into plural storage areas of the storage subsystem, and wherein the storage subsystem transfers content of data update into a first storage

area among the plural storage areas, in which the data have been duplicated and written, to a second storage subsystem connected to the storage subsystem before a request of the computer for the data update to the storage area is completed, and wherein the storage subsystem transfers the content of the data update into a second storage area among the plural storage areas, in which the data have been duplicated and written, to a third storage subsystem connected to the storage subsystem after a request of the computer for the data update to the storage area is completed.

The above described features of the present invention, particularly where the storage subsystem transfers content of data update into a first storage area among the plural storage areas, in which the data have been duplicated and written, to a second storage subsystem connected to the storage subsystem before a request of the computer for the data update to the storage area is completed, and where the storage subsystem transfers the content of the data update into a second storage area among the plural storage areas, in which the data have been duplicated and written, to a third storage subsystem connected to the storage subsystem after a request of the computer for the data update to the storage area is completed, or where the transfers are by synchronous and/or asynchronous remote copy, are not taught or suggested by any of the references of record whether taken individually or in combination with each other.

6. Fee (37 C.F.R. 1.17(i))

The fee required by 37 C.F.R. § 1.17(i) is to be paid by:

☒ the Credit Card Payment Form (attached) for \$130.00.

☐ charging Account _____ the sum of \$130.00.

A duplicate of this petition is attached.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, P.C., Deposit Account No. 50-1417 (566.43181X00).


Respectfully submitted,

MATTINGLY, STANGER & MALUR, P.C.



Frederick D. Bailey
Registration No. 42,282

FDB/sdb
Enclosures

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|--|-------------------------------|---------------------------------|
|  <p>PETITION FEE Under 37 CFR 1.17(f), (g) & (h) TRANSMITTAL (Fees are subject to annual revision)</p> <p>Send completed form to: Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450</p> | Application Number | 10/676,121 |
| | Filing Date | October 2, 2003 |
| | First Named Inventor | Takashige IWAMURA et al. |
| | Art Unit | 2186 |
| | Examiner Name | Not yet assigned |
| | Attorney Docket Number | 566.43181X00 |

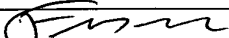
Enclosed is a petition filed under 37 CFR 1.102(d) that requires a processing fee (37 CFR 1.17(f), (g), or (h)). Payment of \$ 130.00 is enclosed.

This form should be included with the above-mentioned petition and faxed or mailed to the Office using the appropriate Mail Stop (e.g., Mail Stop Petition), if applicable. For transmittal of processing fees under 37 CFR 1.17(i), see form PTO/SB/17i.

Payment of Fees (small entity amounts are NOT available for the petition (fees))

- ☒ The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 50-1417:
- ☐ petition fee under 37 CFR 1.17(f), (g) or (h) ☒ any deficiency of fees and credit of any overpayments
- Enclose a duplicative copy of this form for fee processing.
- ☐ Check in the amount of \$ _____ is enclosed.
- ☒ Payment by credit card (From PTO-2038 or equivalent enclosed). Do not provide credit card information on this form.

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| Petition Fees under 37 CFR 1.17(f): For petitions filed under: § 1.53(e) - to accord a filing date. § 1.57(a) - to according a filing date. § 1.182 - for decision on a question not specifically provided for. § 1.183 - to suspend the rules. § 1.378(e) for reconsideration of decision on petition refusing to accept delayed payment of maintenance fee in an expired patent. § 1.741(b) - to accord a filing date to an application under § 1.740 for extension of a patent term. | Fee \$400 | Fee Code 1462 |
| Petition Fees under 37 CFR 1.17(g): For petitions filed under: §1.12 - for access to an assignment record. §1.14 - for access to an application. §1.47 - for filing by other than all the inventors or a person not the inventor. §1.59 - for expungement of information. §1.103(a) - to suspend action in an application. §1.136(b) - for review of a request for extension of time when the provisions of section 1.136(a) are not available. §1.295 - for review of refusal to publish a statutory invention registration. §1.296 - to withdraw a request for publication of a statutory invention registration filed on or after the date the notice of intent to publish issued. §1.377 - for review of decision refusing to accept and record payment of a maintenance fee filed prior to expiration of a patent. §1.550(c) - for patent owner requests for extension of time in <u>ex parte</u> reexamination proceedings. §1.956 - for patent owner requests for extension of time in <u>inter partes</u> reexamination proceedings. § 5.12 - for expedited handling of a foreign filing license. § 5.15 - for changing the scope of a license. § 5.25 - for retroactive license. | Fee \$200 | Fee code 1463 |
| Petition Fees under 37 CFR 1.17(h): For petitions filed under: §1.19(g) - to request documents in a form other than that provided in this part. §1.84 - for accepting color drawings or photographs. §1.91 - for entry of a model or exhibit. §1.102(d) - to make an application special. §1.138(c) - to expressly abandon an application to avoid publication. §1.313 - to withdraw an application from issue. §1.314 - to defer issuance of a patent. | Fee \$130 | Fee Code 1464 |

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|--------------------------|---|--|-------------------------|
| Name (Print/Type) | Frederick D. Bailey | Registration No. (Attorney/Agent) | 42,282 |
| Signature |  | Date | January 27, 2005 |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.